

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A remote access system comprising:

a server[[],] ;

a client apparatus for accessing said server,

a network for connecting said server and said client apparatus, and

a storage medium being connected to said client apparatus and storing a remote manipulation application for remotely manipulating said server, an encryption application for encrypting communications on said network, a job application, and an authentication information for remote manipulation to said server stored in the anti-tampering storage area,

wherein

said storage medium stores a middleware for operating said remote manipulation application, said encryption application, and said job application in said client apparatus, and

a CPU of said client apparatus operates the application interface for file access and driver for file access when it executes said middleware for the file access and also operates the interface handler and device driver when it executes the authentication process in view of thereby making communications between said server and said client apparatus.

device for conducting remote access to the server via a communication channel constituted between the client device and the server; and

a storage medium comprising an anti-tampering memory area for storing authentication information to constitute the communication channel and conduct the remote access, and a non-volatile memory area, the storage medium being connected to the client device,

wherein

the storage medium comprises a common interface to be used by the client device to access the anti-tampering memory area and the non-volatile memory area, and

the client device:

accesses the anti-tampering memory area and the non-volatile memory area via the common interface in the storage medium;

constitutes the communication channel between the client device and the server by using a program stored in the non-volatile memory area and the authentication information stored in the anti-tampering memory area; and

conducts remote access to the server via the communication channel.

2. (Currently Amended) The remote access system according to claim 1, wherein ~~when an instruction is generated from said driver for file access or from said device driver, said instruction is controlled in the predetermined sequence.~~ when access to the non-volatile memory area and access to the anti-tampering memory area conducted via the common interface in the storage medium compete with each other, the client device controls the competition.

3. (Currently Amended) The remote access system according to claim 2, wherein ~~when an instruction is generated from said driver for file access or from said device driver, the instruction from said device driver is executed preferentially.~~ wherein the client device controls the competition by conducting access to the non-volatile memory area and access to the anti-tampering memory area to be conducted via the common interface in the storage medium in a predetermined order.

4. (Currently Amended) The remote access system according to claim 1, ~~wherein said storage medium further includes a temporary storage area, and the data generated by the process~~

~~executed by said client apparatus is stored to said temporary storage area. 3, wherein the client device controls the competition by executing access to the anti-tampering memory area to be conducted via the common interface in the storage medium in preference to access to the non-volatile memory area.~~

5. (Currently Amended) A The remote access system comprising

~~a server,~~

~~a gateway connected to said server,~~

~~a client apparatus for executing the authentication process for said gateway by making accessing to said server,~~

~~a network for connecting said server and said client apparatus, and~~

~~a storage medium being connected to said client apparatus and storing a remote manipulation application for remotely manipulating said server, an encryption application for encrypting communications on said network, a job application, and an authentication information for remote manipulation to said server stored in the anti-tampering storage area,~~

~~wherein~~

~~said storage medium stores a middleware for operating said remote manipulation application, said encryption application, and said job application in said client apparatus, and~~

~~a CPU of said client apparatus operates the application interface for file access and driver for file access when it executes said middleware for the file access and also operates the interface handler and device driver when it executes the authentication process in view of thereby making communications between said server and said client apparatus.~~

according to claim 1, wherein the storage medium to the non-volatile memory area;

wherein the client device stores temporary data generated when executing a

program in the client device, in the storage medium.

6. (Currently Amended) The remote access system according to claim 1,
wherein

~~said server includes a plurality of servers and a controller connected to a plurality
of said servers, and~~

~~said client apparatus makes access to said controller for management of power
supply of a plurality of said servers.~~

the non-volatile memory area in the storage medium is configured so as to be able
to be accessed by the client device faster than the anti-tampering memory area,

the storage medium retains a copy of the authentication information stored in the
anti-tampering area, in the non-volatile memory area in the storage medium, and

the client device utilizes the copied authentication information instead of the
authentication information stored in the anti-tampering area.

7. (Currently Amended) The remote access system according to claim 1, ~~wherein said storage
medium holds a copy of the authentication information stored within an anti-tampering area.~~
further comprising a controller connected to the server and the client device to manage a power
supply of the server,

wherein the client device accesses the controller and conducts power supply
management of the server to be subject to the remote access.

8. (Currently Amended) ~~A gateway in a remote access system for making access to said server
from said client apparatus, comprising~~

~~a server,~~

~~a client apparatus for making access to said server,~~

~~a storage medium storing~~

~~a remote manipulation application program connected to said client apparatus for remote manipulation of said server,~~

~~an encryption application program for encryption of the communications on said network, and~~

~~the authentication information for remote manipulation for said server stored in an anti-tampering storage area,~~

~~wherein~~

~~the authentication process of a user manipulating said client apparatus is conducted on the basis of said authentication information transmitted via the interface handler and the device driver which is operated with the middleware loaded to said client apparatus from said storage medium.~~

The remote access system according to claim 1, wherein

the storage medium is connected to the client device, and

when the remote access conducted by the client device using the constituted communication channel is finished and the connection between the client device and the storage medium is canceled, the client device deletes information concerning the remote access conducted using the constituted communication channel, from the client device.

9. (Currently Amended) ~~A client apparatus connected to a server via a network, comprising~~

~~a reader/writer connected to a storage medium storing a remote manipulation application program for remote manipulation of said server, an encryption application program for encrypting communications on said network, and an authentication information for remote manipulation for said server stored in an anti-tampering storing area,~~

~~wherein~~

~~in order to execute the file access, the communications with said server are~~

~~executed by operating the application interface for file access and the driver for file access when the middleware loaded from said storage medium is executed via said reader/writer and in order to conduct the authentication process, the communications with said server are executed by operating the interface handler and the device driver.~~

A remote access system comprising:

a server;

a client device for conducting remote access to the server via a communication channel constituted between the client device and the server; and

a storage medium comprising an anti-tampering memory area for storing authentication information to constitute the communication channel and conduct the remote access, and a non-volatile memory area for storing a boot program to be executed when the client device is driven,

wherein

the storage medium comprises a common interface to be used by the client device to access the anti-tampering memory area and the non-volatile memory area, and

the client device:

accesses the anti-tampering memory area and the non-volatile memory area via the common interface of the storage medium;

starts a driving process by executing the boot program stored in the storage medium;

constitutes the communication channel between the client device and the server by using a program stored in the non-volatile memory area and the authentication information stored in the anti-tampering memory area after the client device is driven; and

conducts remote access to the server via the communication channel.

10. (Currently Amended) ~~A program for remote access to the client apparatus for making access to said server via a server and a network,~~

~~wherein~~

~~when the same program is installed to said client apparatus for the file access, communications between said server and said client apparatus may be realized by operating the application interface for file access and the driver for file access, and~~

~~when the authentication process is executed, communications between said server and said client apparatus may be realized by operating the interface handler and the device driver.~~

The remote access system according to claim 9, wherein when access to the non-volatile memory area and access to the anti-tampering memory area conducted via the common interface in the storage medium compete with each other, the client device controls the competition.

11. (Currently Amended) ~~A remote access system comprising~~

~~a server,~~

~~a client apparatus for making access to said server via a network, and~~

~~a storage medium connected to said client apparatus for storing a remote manipulation application program for remote manipulation of said server, an encryption application program for encrypting communications on said network, a job application, an authentication information for remote manipulation to said server stored in an anti-tampering storing area, a boot program executed by the BIOS of said client apparatus when said client apparatus is driven, and an OS program,~~

~~wherein~~

~~BIOS of said client apparatus is set to detect the boot program stored in said storage medium earlier than the boot program in said client apparatus, and~~

~~said client apparatus detects, after the power supply is turned ON, the boot~~

~~program stored in said storage medium and the OS program stored in said storage medium is acquired and executed with said boot program.~~

The remote access system according to claim 10, wherein

the storage medium stores an OS program to be used to drive the client device,

and

a switch is provided to set whether to drive the client device by using the OS

program or drive the client device without using the OS program.

12. (Currently Amended) The remote access system according to claim 11, wherein

~~said client apparatus includes a display means, and~~

~~after said OS program is driven and said remote manipulation application is executed, a communication authentication request for said server is displayed first on said display means.~~

9, wherein

the client device comprises a display means; and

a screen view is displayed on the display means to request a user to input authentication information required when constituting the communication channel.

13. (Currently Amended) The remote access system according to claim 11,

wherein

~~said storage medium includes a means for selecting whether said OS program is driven or not on said client apparatus,~~

~~when it is selected that said OS program is driven on said client apparatus with said means for selection, said OS program is executed which is stored in said storage medium on said client apparatus by transmitting the boot program on said storage medium to said client apparatus, and~~

~~when it is selected that said OS program is not driven on said client apparatus with said means for selection, the OS program is executed which is previously stored in said client apparatus on said client apparatus by transmitting a dummy data to said client apparatus.~~

when it is set in the switch to drive the client device without using the OS program stored in the storage medium,

the client device acquires the setting from the storage medium, executes an OS program previously stored in the client device instead of the OS program stored in the storage medium, and conducts the driving.

14. (Currently Amended) The remote access system according to claim 11,
wherein

~~said storage medium is connected to said client apparatus via the reader/writer of said storage medium,~~

~~said reader/writer includes a means for selecting whether said OS program is driven on said client apparatus or not,~~

~~when it is selected that said OS program is driven on said client apparatus with said means for selection, the OS program stored on said storage medium is executed on said client apparatus by transmitting the boot program on said storage medium to said client apparatus, and~~

~~when it is selected that said OS program is not driven on said client apparatus with said means for selection, the OS program stored previously to said client apparatus is executed on said client apparatus by transmitting a dummy data to said client apparatus.~~

10, wherein

the storage medium is connected to the client device via a reader/writer of the storage medium,

the storage medium stores an OS program to be used to drive the client device,

and

the reader/writer comprises a switch to set whether to drive the client device by using the OS program or drive the client device without using the OS program.

15. (Currently Amended) The remote access system according to claim 13,
wherein

~~the boot program stored in said storage medium decides, after it is stored in said client apparatus, whether a storage device provided in said client apparatus is restricted in access or not, and~~

~~when access is restricted, said access restriction is cancelled using the authentication information stored in said storage medium to execute the OS program stored in said storage medium.~~

9, wherein

the client device:

stores an OS program to be used to drive the client device, in a storage device provided in the client device;

executes a boot program stored in the storage medium; and

determines whether access restriction is set in the storage device provided in the client device, and

when the access restriction is set and the access restriction can be canceled using the authentication information stored in the storage medium, the client device is driven by canceling the access restriction and executing the OS program stored in the storage device.

16. (Currently Amended) The remote access system according to claim 15, wherein ~~said boot program executes the OS program stored in said storage medium, if cancellation of said access restriction using the authentication information stored in said storage medium has failed.~~

the storage medium stores an OS program to be used to drive the client device, and
when the access restriction cannot be canceled, the client device is driven by
executing the OS program stored in the storage medium.

17 - 21. (Cancelled)